

EXHIBIT

6

DEFENDANTS' MOTION TO EXCLUDE THE TESTIMONY OF DR. CHRISTOPHER TEAF

05-CV-0329 GKF-PJC

IN THE UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF OKLAHOMA

W. A. DREW EDMONDSON, in his)
capacity as ATTORNEY GENERAL)
OF THE STATE OF OKLAHOMA and)
OKLAHOMA SECRETARY OF THE)
ENVIRONMENT C. MILES TOLBERT,)
in his capacity as the)
TRUSTEE FOR NATURAL RESOURCES)
FOR THE STATE OF OKLAHOMA,)
Plaintiff,)
vs.) 4:05-CV-00329-TCK-SAJ
TYSON FOODS, INC., et al,)
Defendants.)

THE VIDEOTAPED DEPOSITION OF
VALERIE HARDWOOD, PhD, produced as a witness on
behalf of the Defendants in the above styled and
numbered cause, taken on the 18th day of July, 2008,
in the City of Tulsa, County of Tulsa, State of
Oklahoma, before me, Lisa A. Steinmeyer, a Certified
Shorthand Reporter, duly certified under and by
virtue of the laws of the State of Oklahoma.

TULSA FREELANCE REPORTERS
918-587-2878

1 **A** Correct.

2 **Q** Do you see that? Do you have any notion of
3 the hundred thousand individuals who Dr. or
4 Professor Caneday identified, any idea how many of
5 them are infants? 10:22AM

6 **A** No.

7 **Q** Do you suspect there are many infants going
8 for floats in the Illinois River watershed?

9 MR. PAGE: Object to the form.

10 **A** I really don't know. 10:23AM

11 **Q** Do you have any idea how many of the hundred
12 thousand are children?

13 **A** No, I don't.

14 **Q** Pregnant women?

15 **A** No, I don't. 10:23AM

16 **Q** Elderly?

17 **A** No, I do not know.

18 **Q** Immunocompromised?

19 **A** No, I don't know.

20 **Q** Let's turn to the notion of bacteria that are 10:23AM
21 in a viable but not culturable state, and this is
22 something you discussed and testified about
23 previously. Viable but not culturable does not mean
24 undetectable; right?

25 **A** Viable but not culturable means undetectable 10:23AM

1 by conventional culture methods, but there are other
2 methods that could potentially be adaptive for
3 detecting them.

4 Q They could be detected, for instance, for
5 DNA-based methods, such as PCR; is that correct?

10:23AM

6 A That's correct.

7 Q What are the -- what are the relative
8 advantages of doing culturing instead of -- over
9 PCR?

10 A The biggest advantage of -- well, I guess if
11 you can clarify that a little bit, so you asked me
12 what are the biggest advantages of doing culturing
13 over PCR show. In what context are you referring
14 to?

15 Q That's a good question. Which one is faster?

10:24AM

16 A PCR was faster.

17 Q Which one is cheaper?

18 A Oh, that depends on the method. So some kinds
19 of culture method are cheap and some are not.

20 Q If the PCR assay is already developed, so
21 science has been done and it's been verified and
22 it's known to identify, say, Campylobacter, so
23 that's all in the box and you pull it off the shelf
24 and you are going to use it, is it cheaper to do
25 that or culture?

10:24AM

10:24AM

1 10 samples from anywhere in the watershed, you would
2 expect to find these same relationships?

3 A I would expect to find similar relationships,
4 not necessarily the same R squared, but I would
5 expect to find a relationship between indicator
6 bacteria concentrations and the biomarker.

02:05PM

7 Q Okay. Did you perform any calculations as to
8 how many litter samples you should take to
9 accurately characterize the watershed?

10 A No.

02:05PM

11 Q In the water samples -- background question.
12 Poultry is not the only source of indicator bacteria
13 in surface water in the IRW; correct?

14 A Poultry is a dominant source of indicator
15 bacteria in the watershed.

02:05PM

16 Q I knew you believed that, but there are other
17 sources of indicator bacteria?

18 A There can be.

19 Q There can be?

20 A Yes.

02:05PM

21 Q Okay. Are there?

22 A Okay.

23 Q Do you think it's possible that poultry is the
24 only source of indicator bacteria in the IRW?

25 A Again, poultry are a dominant source but it is

02:06PM

1 possible that there are other sources.

2 Q Well, if they're a dominant source, then there
3 must be other sources. Can we agree there are other
4 sources?

5 A I can agree that there are other sources, yes. 02:06PM

6 Q Thank you. What -- when you did the
7 correlation here for your paper between PCR sequence
8 and indicator bacteria in the water, did you perform
9 any -- did you do anything to control for ultimate
10 sources of the indicator bacteria? 02:06PM

11 A We measured the poultry litter biomarker, but
12 we did not have specific microbial source tracking
13 tests for any other species.

14 Q Okay, and so the Enterococcus and the E. coli
15 that are included in this calculation, the 02:06PM
16 correlation in the water, those include all
17 indicator bacteria or all E. coli and all
18 Enterococcus regardless of source?

19 A That would include all E. coli and all
20 Enterococci that were culturable. 02:07PM

21 Q Okay. Did you find the PCR sequence in all of
22 your edge of field samples?

23 A No. I don't think --

24 Q You can probably look on Exhibit 12 and it
25 will tell you. 02:07PM